Knowledge

Components of fitness	Fitness test	Summary of protocol
Body composition	Skin fold test	• Using skin fold calliper • Take four measurements (biceps, triceps, back & hip) • Convert results using body fat calculations.
Flexibility	Sit and reach test	• Use a sit and reach box • Remove shoes and adopt a seating position on the floor with legs straight • Keeping legs straight, reach over the sit and reach box and push the slider with both hands • Take measurement in cm.
Muscle endurance	1 minute press-up test	• Perform as many press-ups in 1 minute • Elbows must bend to 90 degrees and then straighten, with the body maintaining a straight position from head to toes.
	1 minute sit-up test	• Perform as many sit-ups in 1 minute • Lie on your back with knees bent and arms across the chest • Raise body to 90 degrees at the hip, keeping arms across the chest.
Muscle strength	Hand grip dynamometer	• Using a hand grip dynamometer • Use your dominant hand and keep your arm straight • Squeeze with maximum force for 5 seconds • Take reading.
	1 rep max test	• Decide on the exercise you are going to use e.g. bench press • Lift weight once using the correct technique • If completed correctly increase the weight • Continue the process until weight cannot be lifted using the correct technique.
Cardiovascular endurance	Multi-stage fitness test (MSFT)	• Mark out 20m using lines on the sports hall floor or with cones • Play the recording of the MSFT • Reach each line on the beep. The time between beeps will gradually get faster – stay in time with the beep • Run until a beep is missed three times – record score (level and shuttle).
	12 minute cooper run	• Use a track or suitable running surface • Run continuously for 12 minutes • Record distance covered.
Agility	Illinois agility run	• Set up course with exact measurements • Start with face down, on go complete the course as quickly as possible • Record time.
Balance	Standing stork test	• Keep one foot planted on the floor, with opposite leg bend at the knee and place foot flat against the knee of the planted leg • Hands on hips and raise heel of plated foot and record the time of the balance.
Co-ordination	Alternative hand throw	• Stand 2m from a flat surface with a tennis ball • Throw ball against the wall with one hand and then catch with the other and repeat for 30 seconds • Count the number of successful catches.
Speed	30m sprint test	• Using a flat surface mark out 30m • Cover this distance in the fastest possible time. Record time using a stopwatch.
Power	Vertical jump	• Stand side on against a wall, with arm nearest wall reach up and measure the height • Jump as high as possible and mark the wall • Measure the distance between the two marls in cm.
Reaction time	Ruler drop test	• A partner holds a 30cm ruler at 0cm above your open hand • Partner drops the ruler without warning, you react to the drop and catch the ruler • Score taken from the top of the thumb, measured in cm.

Application

Measuring health & fitness

Measure health and fitness through fitness testing (by carrying out a variety of **fitness tests**) to help:
• identify strength and weakness
• identify a baseline level of fitness
• compare levels of fitness
• monitor progress
• motivate.

When to test

Fitness testing can be done:
• **before a training programme**. This will identify baseline levels of fitness as well as strength and weakness to set goals.
• **during a training programme** to monitor the progress and to check the program is suitable to the goal set.
• **after a training programme**. To check progress made towards goals set and to compare with other competitors.

Test protocol

Each fitness test will have a test protocol. The test protocol is the method of how the test should be run.

Validity

The fitness test will test the component of fitness it says it will test e.g. 30m sprint test will test speed.

Reliability

By following the protocol, the test will deliver consistent results.